

# Case Study

## Composting at Oregon Health & Science University Food & Nutrition Services — Portland, OR



### Introduction

Oregon Health & Science University (OHSU) is a teaching hospital with approximately 575 beds. It serves an average of 1000 patient meals and 7000 retail meals per day. In 2004, OHSU joined the Advisory Committee of the Portland Composts! Campaign, and in 2005, the City of Portland began offering commercial composting services to foodservice providers in the Portland area. OHSU now has a comprehensive composting system in place, diverting 4 tons of waste from the landfill each week.

All material from the Portland Composts! program is sent to Cedar Grove Composting in Washington State, where the organic material is processed into a valuable, nutrient-rich compost and sold throughout the region.

### Background

OHSU's participation in the Portland Composts! Advisory Committee coincided with an extensive remodel at OHSU Food & Nutrition Department. Because business composting was soon to be an option, OHSU decided to incorporate composting into Campus foodservice operations.

OHSU began composting on April 22, Earth Day, 2005. At first, only food and food-soiled paper from patient trays were composted. Waste from kitchen pots and pans was added to the composting stream in December of 2005, followed by scraps and trimmings from the production area in January 2006. Materials from the main cafeteria began to be composted on Earth Day, 2008, and OHSU now diverts approximately 82% (by weight) of the waste collected from retail away from the landfill.

### Logistics & Implementation

All compostable material from OHSU, even post-consumer waste, is sorted by OHSU staff. This helps reduce contamination. In 2004, OHSU purchased a Somat Super 60 Pulper. Staff scrape



*Somat Pulper at OHSU grinds and dewateres food waste, depositing it in a Portland Composts! roll cart.*

compostable waste and scraps into a water-fed trough, which directs everything into the pulper. The pulper grinds everything into  $\frac{1}{2}$ " pieces and feeds it pulp into roll carts provided by the City composting program. These roll carts are collected and emptied into three one-yard containers on the collection dock and collected by the garbage hauler twice a week. The foodservice department generates about 56 32-gallon roll carts each week. Included in this compostable material are biobased food service ware that has been approved by Cedar Grove Composting.

The hauler delivers the compost to a regional transfer station where it is inspected for contamination, which can be no more than 5%.

### Benefits

Composting has allowed OHSU to dramatically reduce the volume of landfill-bound waste from its operations, saving the facility money on disposal fees and water usage, and providing other environmental benefits to the community. By composting, OHSU is closing the loop on its food

waste. Composting returns organic material and nutrients back to the soil so that it may sustain plant growth and human life. Applying compost also minimizes storm-water runoff, conserves water, and replenishes regional soils, reducing the need for chemical fertilizers.

Food and biobased food service ware waste that ends up in a landfill emits methane when it decomposes. As a green house gas, methane is 23 times more potent than CO<sub>2</sub>. According to the US Composting Council, composting the 25 million tons of food waste Americans sent to landfills in 2005 would have had the same impact on greenhouse gas emissions as removing 7.8 million passenger cars from the road.\*

### Costs

Because OHSU generates so much waste, it decided to invest in equipment to reduce the volume and weight of its compost stream. Smaller programs in the Portland area have been able to join the compost program without an upfront investment. The Somat machine OHSU purchased to grind and dewater compostable waste cost \$25,000, but is able reduce the weight of the compost by 15-25%. In areas where compost fees are determined by weight, this would result in additional cost savings. A grabber magnet, installed on the machine to attract metal cutlery or other objects that mistakenly make their way into the compost stream, cost an additional \$1750.

OHSU has found that maintenance of the system is comparable in price to maintenance of a traditional disposal system. In addition to investment costs, OHSU Food and Nutrition Services hired an additional 1.4 FTE to return trays from the retail operations and ensure proper segregation of food waste for composting. Waste from patient meals is diverted by the same employees that previously collected and disposed of it.

Overall, OHSU has calculated that composting becomes cost-neutral once they produce 2.5 tons of compostable food service waste per week. Because they currently produce approximately 4

tons per week, the compost program saves the facility money.

### Challenges, Considerations, Strategies

- **Training employees** to operate machinery and properly segregate waste is an important piece of a successful composting program. In addition to education, signs graphically depicting what items can go in the various waste streams help to reduce contamination.
- **Fruit flies** may be attracted to the compost, and can be a nuisance. Natural deterrents are available. Visit the Portland Composts! website listed below for information.
- **Odors** from the compost have not been an issue at OHSU as long as there is a quick turn-around and routine cleaning .
- **Financing** - grants may be available through your local government to help with machinery costs for large-scale composting program.

### For More Information

#### Contact:

Jason Tobin  
Program Coordinator  
Oregon Center for Environmental Health  
503-233-2510  
jason@oregon-health.org

#### References and Resources:

\*<http://www.compostingcouncil.org/education/resources.php>

- Portland Composts! - <http://www.portlandonline.com/osd/index.cfm?c=41682>
- Health Care Without Harm: Choosing Environmentally Preferable Food Service Ware - <http://www.noharm.org/details.cfm?ID=1456&type=document>
- Somat Pulpers - <http://www.somatcompany.com/pulpers.htm>
- [www.healthyfoodinhealthcare.org](http://www.healthyfoodinhealthcare.org)
- Cedar Grove Composting - <http://www.cedar-grove.com>